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Docket No: SATC-005 (033225-000008)

C of C

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Wright et al

SERIAL NO.: 09/649,479 CONFIRMATION No. 8426

FILING DATE: Aug 28, 2000

TITLE: Gun-only Magnet Used for a Multi-stage Depressed Collector
Klystron

PATENT NO.: 6,777,877 B1

Certificate
JUN 20 2005
of Correction

ISSUED: Aug 17, 2004

EXAMINER: Benny T. Lee

ART UNIT: 2817

CERTIFICATE OF MAILING

I hereby certify that this paper is being deposited with the United States Postal Service as First Class
Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450, on the date
printed below:

Date: June 14, 2005

Name: P Sherman
Penelope Sherman

Commissioner for Patents,
P.O. Box 1450 Alexandria, VA 22313-1450

TRANSMITTAL FOR CERTIFICATE OF CORRECTION

We enclose, pursuant to the provisions of 37 C.F.R. §1.322 and §1.323, a
Certificate of Correction for United States Patent No. 6,777,877. Please make the
Certificate of Correction and the statements herein of record.

The corrections made to the above-identified United States Patent in the Certificate
of Correction filed herewith are to correct mistakes which are of a minor character
according to 35 U.S.C. §255 and 37 C.F.R. §1.323. The proposed corrections do not
constitute such changes in the patent as would constitute new matter or would require

re-examination.

37 C.F.R. §1.322 Corrections

Please see of attached Certificate of Correction number(s) 1-4.

37 C.F.R. §1.323 Corrections

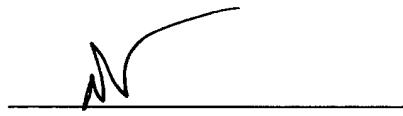
Please see of attached Certificate of Correction number(s) 5.

Fee Under 37 C.F.R. §1.20(a)

A check in the amount of \$100.00 is enclosed pursuant to 37 C.F.R. §1.20(a) for corrections made pursuant to 37 C.F.R. §1.323 to correct mistakes other than by the office.

Respectfully submitted,
THELEN REID & PRIEST, LLP

Dated: June 9, 2005



David Ritchie
Reg. No. 31,562

THELEN REID & PRIEST, LLP
P.O. Box 640640
San Jose, CA 95164-0640
(408) 292-5800

JUN 22 2005

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO : 6,777,877 *B1*

DATED : Aug 17, 2004

INVENTOR(S) : Wright et al.

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

- 1) In Column 6 line 62 before the magnetic field, replace "provided by" with --from--.
- 2) In Column 6 line 62 after the magnetic field replace "from" with --provided by--.
- 3) In Column 7 line 1 after The vacuum electron device of claim 1 wherein said insert --region--.
- 4) In Column 7 line 2 after said collector delete "a region".
- 5) In Column 8 line 16 replace "electron." with --electrons.--.

MAILING ADDRESS OF SENDER: Thelen Reid & Priest
P.O. Box 640640
San Jose, CA 95164-0640

PATENT NO. 6,777,877 *B1*

No. of additional copies



This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

JUN 22 2005

Effective on 12/08/2004.
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL for FY 2005

Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$)
100

Complete if Known	
Application Number	09/649,479
Filing Date	Aug 28, 2000
First Named Inventor	Wright et al
Examiner Name	Benny T. Lee
Art Unit	2817
Attorney Docket No.	SATC-005 (033225-000008)

METHOD OF PAYMENT (check all that apply)

- Check Credit Card Money Order None Other (please identify) : _____
- Deposit Account Deposit Account Number: 50-1698 Deposit Account Name: Thelen Reid & Priest
- For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)
- | | |
|---|---|
| <input type="checkbox"/> Charge fee(s) indicated below | <input type="checkbox"/> Charge fee(s) indicated below, except for the filing fee |
| <input checked="" type="checkbox"/> Charge any additional fee(s) or underpayments of fee(s) | <input checked="" type="checkbox"/> Credit any overpayments |
- Under 37 CFR 1.16 and 1.17

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		
	Small Entity	Fee (\$)	Small Entity	Fee(\$)	Fee(\$)	Small Entity	Fee (\$)
Utility	300	150	500	250	200	100	_____
Design	200	100	100	50	130	65	_____
Plant	200	100	300	150	160	80	_____
Reissue	300	150	500	250	600	300	_____
Provisional	200	100	0	0	0	0	_____

2. EXCESS CLAIM FEES

Fee Description

Each claim over 20 (including Reissues)

Each independent claim over 30 (including Reissues)

Multiple dependent claims

Total Claims	Extra Claims	Fee (\$)	Fee Paid (\$)	Small Entity	
				Fee (\$)	Fee (\$)
_____ - 20 or HP=	_____ X _____	= _____	_____	50	25

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims	Extra Claims	Fee (\$)	Fee Paid (\$)	Multiple Dependent Claims	
				Fee (\$)	Fee Paid (\$)
_____ - 3 or HP=	_____ X _____	= _____	_____	_____	_____

HP = highest number of independent claims paid for, if greater than 3.

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
_____ - 100 = _____ / 50 = _____	(round up to a whole number)	_____	_____	_____

4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge) : 6212 37CFR 1.20(a) _____ 100

SUBMITTED BY

Signature		Registration No. (Attorney/Agent)	31,562	Telephone	(408)292-5000
Name (Print/Type)	David Ritchie			Date	June 9, 2005

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing this form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

JUN 22 2005

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO : 6,777,877 *B1*

DATED : Aug 17, 2004

INVENTOR(S) : Wright et al.

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

- 1) In Column 6 line 62 before the magnetic field, replace "provided by" with --from--.
- 2) In Column 6 line 62 after the magnetic field replace "from" with --provided by--.
- 3) In Column 7 line 1 after The vacuum electron device of claim 1 wherein said insert --region--.
- 4) In Column 7 line 2 after said collector delete "a region".
- 5) In Column 8 line 16 replace "electron." with --electrons.--.

MAILING ADDRESS OF SENDER:
Thelen Reid & Priest
P.O. Box 640640
San Jose, CA 95164-0640

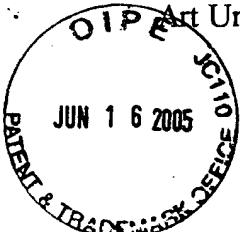
PATENT NO. 6,777,877 *B1*

No. of additional copies

1

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.12.

1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Masako Ando on 12 & 17 March 2004.

The application has been amended as follows:

In the Claims:

In claim 1, line 11, "from" has been changed to --provided by--. *← Corrections 1+2*

In claim 2, line 2, "collector is defined by a" has been deleted and "which" has been deleted and replaced by --of said collector--. *← Corrections 3+4*

In claim 3, line 1, "is" has been deleted and replaced with --region--; line 2, "from said magnet such that" has been deleted and replaced by --causes-- and "evenly disperses on" has been rephrased as --to evenly disperse in--.

In claim 4, line 10, "the body of" has been deleted and --arrangement-- has been inserted after the second occurrence of "magnet"; lines 12, 13, --multi-stage depressed-- has been inserted prior to "collector" at each occurrence and "region" has been deleted at each occurrence.

In claim 5, line 3, --due to said multi-stage collector having substantially no magnetic field reversal,-- has been inserted prior to "thereby"; lines 3, 4, "due to magnetically focused electrons" has been deleted and replaced by --within said internal chamber--.



UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NUMBER:

FILING DATE:

FIRST NAMED APPLICANT:

ATTORNEY DOCKET NO.:

EXAMINER:

ART UNIT

PAPER NUMBER

DATE MAILED:

This is a communication from the examiner in charge of this application.
COMMISSIONER OF PATENTS AND TRADEMARKS

NOTICE OF ALLOWABILITY

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith or previously mailed, a Notice of Allowance and Issue Fee Due or other appropriate communication will be mailed in due course. THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

- This communication is responsive to the amendment filed 1 December 2003.
- The allowed claim(s) is/are 1-3, 8; 4-6, 9; 7.
- The drawings filed on _____ are acceptable as formal drawings.
- Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- All Some* None of the:
- Certified copies of the priority documents have been received.
- Certified copies of the priority documents have been received in Application No. _____.
- Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

- Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. THIS THREE-MONTH PERIOD IS NOT EXTENDABLE FOR SUBMITTING NEW FORMAL DRAWINGS, OR A SUBSTITUTE OATH OR DECLARATION. This three-month period for complying with the REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL is extendable under 37 CFR 1.136(a).

- Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION, PTO-152, which discloses that the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.
- Applicant MUST submit NEW FORMAL DRAWINGS
- because the originally filed drawings were declared by applicant to be informal.
- including changes required by the Notice of Draftsperson's Patent Drawing Review, PTO-948, attached hereto or to Paper No. _____.
- including changes required by the proposed drawing correction filed on _____, which has been approved by the examiner.
- including changes required by the attached Examiner's Amendment/Comment or in the Office action of Paper No. _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings.

Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Any reply to this notice should include, in the upper right hand corner, the APPLICATION NUMBER (SERIES CODE/SERIAL NUMBER). If applicant has received a Notice of Allowance and Issue Fee Due, the ISSUE BATCH NUMBER and DATE of the NOTICE OF ALLOWANCE should also be included.

Attachment(s)

- Notice of References Cited, PTO-892
- Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- Notice of Draftsperson's Patent Drawing Review, PTO-948
- Notice of Informal Patent Application, PTO-152
- Interview Summary, PTO-413
- Examiner's Amendment/Comment
- Examiner's Comment Regarding Requirement for the Deposit of Biological Material
- Examiner's Statement of Reasons for Allowance



UNITED STATES DEPARTMENT OF COMMERCE
Patent & Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20591

APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTY/REP
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SEARCHED	INDEXED
SERIALIZED	FILED
ART UNIT	

DATE MAILED:

INTERVIEW SUMMARY

All participants (applicant, applicant's representative, PTO personnel):

- (1) Benny Lee (PTO) (3) _____
(2) Masako Ando (4) _____

Date of Interview 12, 17 March 2004

Type: Telephonic Televideo Conference Personal (copy is given to applicant applicant's representative)

Exhibit shown or demonstration conducted: Yes No If yes, brief description: _____

Agreement was reached. was not reached.

1 - 9

Claim(s) discussed: _____

Identification of prior art discussed: _____

COPIES

Description of the general nature of what was agreed to if an agreement was reached, or any other comments:

Clarifying changes to cl 1-9 were discussed with applicant's representative by the Examiner and specific claim amendments were agreed to such as to place the application in condition for allowance. See accompanying Examiners amendment

(A fuller description, if necessary, and a copy of the amendments, if available, which the examiner agreed would render the claims allowable must be attached. Also, where no copy of the amendments which would render the claims allowable is available, a summary thereof must be attached.)

It is not necessary for applicant to provide a separate record of the substance of the interview.

Unless the paragraph above has been checked to indicate to the contrary. A FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION IS NOT WAIVED AND MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has not yet been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW.

Examiner Note: You must sign this form unless it is an attachment to another form.

SN 649479

O P E
JUN 16 2005
PATENT & TRADEMARK OFFICE
SEARCHED INDEXED
SERIALIZED FILED

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF CLAIMS

1. (Currently Amended) A high power output vacuum electron device comprising:
a cathode for emitting a supply of electrons,
an anode for attracting said electrons, said anode having a configuration to allow said electrons to pass through said anode,
an RF generator circuit in the path of said electron beam for generating RF signal energy in the presence of a high-voltage power source,
a magnet including a magnet pole piece surrounding said anode and said RF generation circuit for focusing said electrons into a collimated beam, and
a collector for receiving the collimated electron beam and for returning the electrons to the cathode, said collector is a multi-stage depressed collector which is
Corrections ✓ shielded from the magnetic field from said magnet, *Corrections 2*
provided by
wherein said magnet includes no magnet pole piece in the vicinity of a region of said collector, a magnetic material surrounding the collector region being disposed such that substantially no magnetic field reversal is present at the collector region.

2. (Previously Amended) The vacuum electron device of Claim 1 wherein said collector is defined by a region which is free of any magnetic fields such that the electron beam naturally disperses to evenly deposit said electrons on inner walls of said collector, said collector being thereby free of hot spots due to uneven electron deposition thereon.

3. (Original) The vacuum electron device of Claim 1 wherein said collector is free of

magnetic flux reversals [from said magnet such that] the electron beam evenly disperses ~~on~~ ⁱⁿ ~~in~~
said collector.

Region ✓

4. (Previously Amended) A vacuum electron device including a source of electrons, said electrons being configured into a narrow beam, and a multi-stage depressed collector for collecting said electrons, the improvement comprising:

a magnet arrangement surrounding and focusing said narrow beam, the magnetic flux of said magnet arrangement being parallel to and collinear with the centerline of said electron beam, said magnet arrangement having a first open pole piece adjacent to the area of said source of electrons to initially focus said electron beam, and a second open pole piece along said centerline to focus and drive said electron beam, said magnet having no open magnet pole piece in the vicinity of said multi-stage depressed collector so that any magnetic flux from the magnet is directed back into the body of said magnet,

and

a magnetic material surrounding the collector region such that substantially no magnetic field reversal is present at the collector region.

✓ multi-stage expns

✓ arrangement

5. (Previously Amended) The vacuum electron device of Claim 4 wherein said multi-stage depressed collector includes an internal chamber, said electrons evenly dispersing within said internal chamber thereby eliminating any hot spots [due to magnetically focused electrons]

✓ within said internal chamber.

✓ due to said multi-stage depressed collector having substantially no magnetic field reversal,

6. ((Previously Amended) The vacuum electron device of Claim 5 wherein each [of]

✓ [said] stages is connected to a different high-voltage supply such that electrons of different
kinetic energies will impinge on the associated depressed collector.

✓ stage of the MS

7. ((Previously Amended) A gun only magnet utilized in a multi-stage depressed

ES₁ collector high-energy vacuum electron device comprising:

a first pole piece region generating magnetic flux adjacent a cathode of said
vacuum electron device to drive and initially focus electrons emitted from said cathode,
a second pole piece region providing magnetic flux along the path of electrons to
focus said electrons into a narrow beam, said magnet having no pole magnet piece in the
region of said vacuum electron device where the electrons are collected and returned to
said cathode, and

a magnetic material surrounding the [collector] region such that substantially no
magnetic field reversal is present at the [collector] region.

✓ of collected electrons
✗ of collected electrons

8. (Previously Presented) The vacuum electron device of Claim 1 wherein the

magnetic field includes a refocusing region in vicinity of an entrance to said collector
region.

✓ the

9. (Previously Presented) The vacuum electron device of Claim 4 wherein said

magnet arrangement further generates a refocusing magnetic field in vicinity of an

entrance to said [collector] region.

✓ of collected electrons
of

✓ the



BEST AVAILABLE COPY

Serial/Patent No.: 09/649,479 Filing/Issue Date: 8/28/00

Applicant: Edward L. Wright et al.

Title: GUN-ONLY MAGNET USED FOR A MULTI-STAGE DEPRESSED COLLECTOR KLYSTRON

TRP Docket No.: SATC-005 Atty/Secty Initials: DBR/MA/ /cd

Date Mailed: 11/24/03 Docket Due Date: 11/24/03

The following has been received in the U.S. Patent & Trademark Office on the date stamped hereon:

- Amendment/Response (2 pgs.) IDS & PTO 1449 (pgs.)
 Appeal Brief (pgs.) (in triplicate) _____ Pieces of Prior Art Enclosed
 Application - Utility (pgs. with cover & abstract) Issue Fee Transmittal
 Application - Rule 1.53(b) Continuation (pgs.) Submission of Formal Drawings:
 Application - Rule 1.53(b) Division (pgs.) # of sheets includes figures
 Application - Rule 1.53(b) CIP (pgs.)
 Application - Rule 1.53(d) CPA (pgs.)
 Application - PCT (pgs.)
 Application - Provisional (pgs.)
 Assignment and Cover Sheet
 Certificate of Correction
 Certificate of Mailing Notice of Appeal
 Declaration & POA (pgs.) Postcard
 Fee Transmittal Preliminary Amendment (pgs.)
 Drawings (informal): Reply Brief (pgs.)

 Other: Req and Cert. Not to Publish - Rule 1.213
Copy of U.S. Pat. 6,645,009 & 6,211,657; Terminal Disc.; Sumt. of Assignee Request for Continued Examination (RCE) (pgs.)
11/24/03; Copy of Not. of Rec., Cover Sheet & Assign.- S.N. 09,649,479 Request for Extension of Time 3 Month(s)
3/9/01; Copy of Not. of Rec., Cover Sheet & Assign.- S.N. 09/668,008 3/21/01; Response to Notice to File Missing Parts
LR37CFR§10.9(b); & Affidavits of Inv.'s E. Wright & R. Dobbs Copy of PTO Notice to File Missing Parts
 Transmittal Letter
 Express Mail No.: _____
 Check(s) \$1,060. Deposit Acct. No. 50-1698 \$_____

Patent Code: 1814/1253

Client/Matter # 033225-8

